H. M. HOELSCHER & J. H. GAVIN.

STOP COCK.

APPLICATION FILED MAR. 3, 1904.

912,569.

Patented Feb. 16, 1909.

Fig. 1

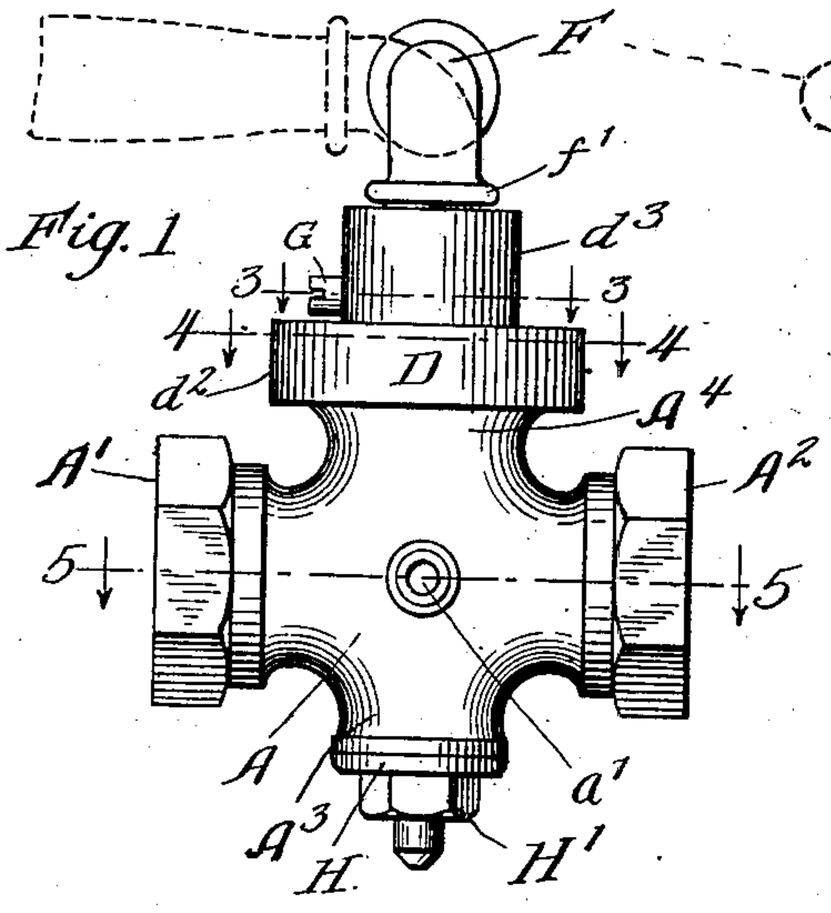


Fig. 2

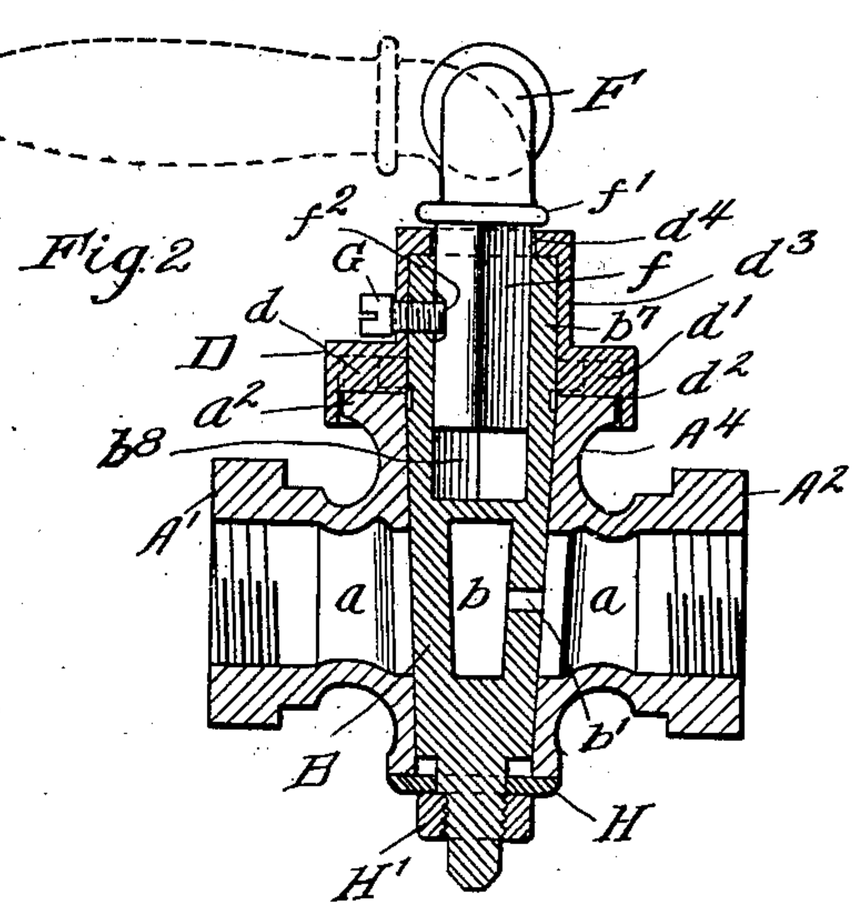


Fig. 3

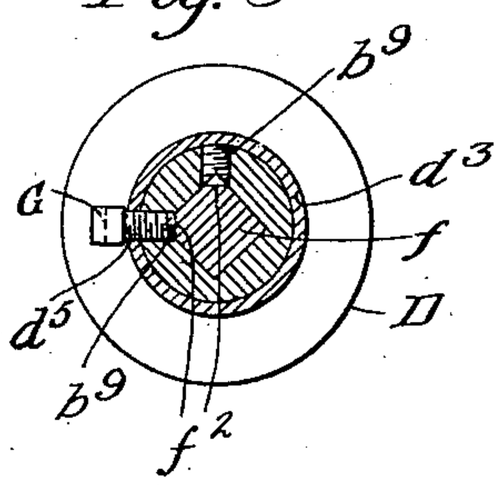


Fig. 4

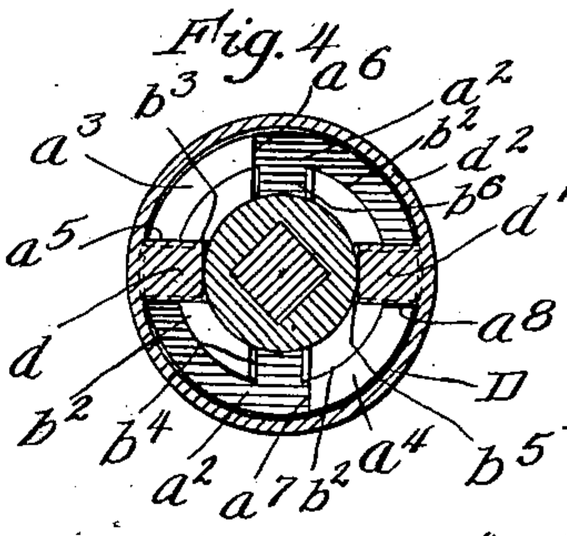


Fig. 6

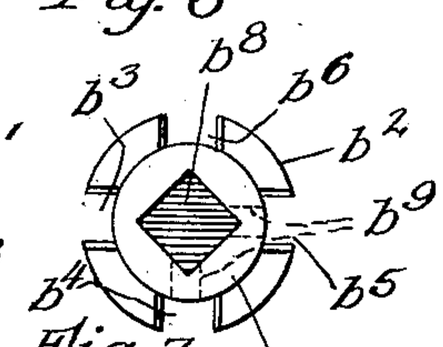


Fig. 7

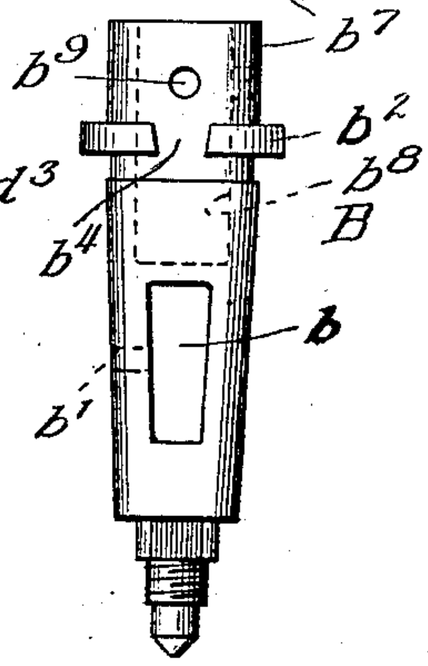


Fig. 5

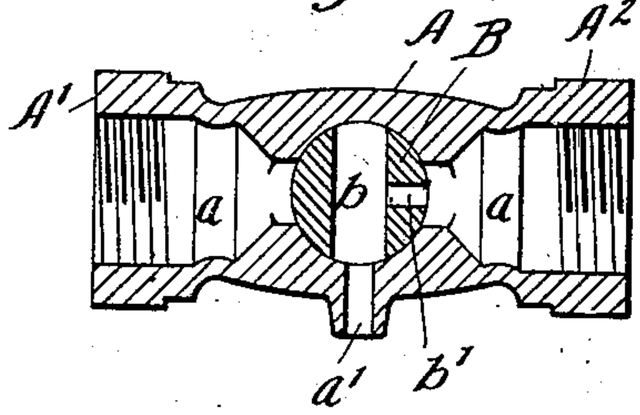


Fig. 9

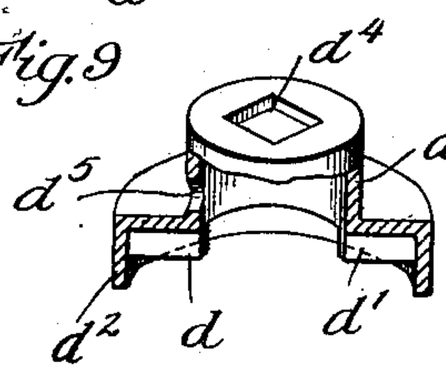
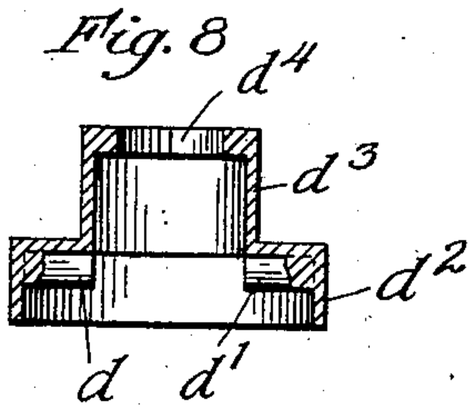


Fig. 8



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UNITED STATES PATENT OFFICE.

HERMAN M. HOELSCHER AND JOHN H. GAVIN, OF CHICAGO, ILLINOIS, ASSIGNORS TO L. WOLFF MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

STOP-COCK.

No. 912,569. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed March 3, 1904. Serial No. 196,425.

To all whom it may concern:

Be it known that we, HERMAN M. HOELSCHER and JOHN H. GAVIN, citizens of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Stop-Cocks, of which the following is a specification.

Our invention relates to improvements in cap stop cocks.

The object of our invention is to provide a cap stop cock of a simple, strong, efficient and durable construction which will entirely exclude sand and dirt from the valve and which may be used either as a right or left hand device.

Our invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and specified in the claim.

In the accompanying drawing forming a part of this specification, Figure 1 is a side elevation of a cap stop cock embodying our invention. Fig. 2 is a central vertical section. Figs. 3, 4 and 5 are horizontal sections on lines 3—3, 4—4 and 5—5 respectively of Fig. 1. Fig. 6 is a detail plan or top view of the valve or plug. Fig. 7 is a side elevation of the plug and Fig. 8 is a detail sectional view of the cap. Fig. 9 is a perspective view of the cap partly in section.

In the drawing, A represents the valve shell or casing having the usual threaded hubs A^1 and A^2 to connect with the water pipes leading to the main and to the building and water way or passage a through the same. The shell A is further provided with a waste passage a^1 and the customary bosses or extensions A^3 and A^4 to afford a proper seat for the taper plug or valve B. The upper boss or extension A^4 is furnished with a circular rim a^2 which is provided with two upright, segmental flanges a^3, a^4, the extremities of which form four stops or shoulders a^5, a^6, a^7 and a^8 which coöperate with internal shoulders or projections d, d^1 on the cap D to limit the rotary movement of the cap to a quarter turn.

The taper plug B has a port or water passage b through the same adapted to register with the water way or passage a of the casing when the handle of the plug is turned lengthwise of the casing. The taper plug B also has a small port or passage way b^1 to permit the water in the pipes of the building to drain out through the same and through the waste passage a^1 of the shell or casing. The plug B is further provided with a circular rim b^2 adapted to fit and turn within the upright segmental flanges a^3, a^4 on the rim a^2 of the shell or casing A. The rim b^2 is provided with four notches b^3, b^4, b^5 and b^6 adapted to receive the internal lugs or projections d, d^1 on the cap D, and thus cause the plug to turn with the cap, the rotary movement of the plug being thus limited by the stops on the shell or casing which limit the rotary movement of the cap.

The cap D has a circular rim d^2 which fits over and embraces the circular rim a^2 of the casing or shell A so as to effectually exclude sand and dirt from the valve. The upper part d^3 of the cap fits the cylindrical extension b^7 of the plug B.

F is the handle by which the valve is turned, the same having a square or non-circular shank f adapted to fit within the square or non-circular socket b^8 in the plug B, and to pass through a similar opening d^4 in the top of the cap D. The handle F is further provided with a shoulder f^1 to better close the opening d^4 in the top of the cap D. The handle is secured in place by a set screw G which is inserted through a hole d^5 in the cap D and enters a screw thread hole b^9 in the plug B, and engages a notch f^2 in the shank of the handle. The plug B is secured in the shell or casing A by a washer H and threaded nut H^1. The plug B is provided with two threaded holes b^9 radially a quadrant apart, so that when it is desired to change the stop cock from a right hand one to a left hand one, all that is required to be done, is to remove the cap D and handle F and turn them one quarter around and then replace them the cap D now having its set screw hole d^5 registering with the other threaded hole b^9; and then the handle being again inserted and secured in position by the set screw which now engages the duplicate notch f^2 on the adjacent corner of the shank of the handle the stop cock is ready for operation as a left hand one instead of a right. As the square or non-circular shank of the handle passes through and engages a square or non-circular hole in the cap and fits in a square or non-circular socket in the plug, the handle shank itself thus causes the cap and plug to turn together when the handle is in place.

We hereby disclaim as not of our inven-

tion the constructions shown and described in the United States patent to Trahern, No. 669,815, and in the British patent to Haddan, No. 12,412 of May 19, 1897, and in the Austrian patent to Bründl, No. 1922 of 1900.

We claim:—

In a stop cock, the combination of a shell having a plug seat and a top rim, flanges of quadrant form on said rim extending inward from the outer boundary of the rim and terminating at points about half way to the interior boundary of the rim, the said quadrant flanges being arranged diametrically opposite to each other, the plug having a handle opening and fitted within the shell and having a rim which fits concentrically within the said quadrant flanges of the shell, the plug rim being formed with four diametrically arranged notches, and a cap inclosing the rim of the shell and formed on its under side with radial projections which extend past both the quadrant flanges and the rim of the plug so as to engage both of the same but allow a limited turning of the plug, the notched rim of the plug fitting on the rim of the shell and the cap having a top horizontal flange which extends over the top of the plug, substantially as set forth.

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JOHN H. GAVIN.

Witnesses:
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P. Abrams.